Patent claims

1. A biaxially oriented polyester film having a base layer B, which is composed of at least 80% by weight of a thermoplastic polyester, and having two outer layers A and C, wherein the outer layer A has high surface smoothness and comprises substantially no external particles, and the outer layer C comprises external particles and has, per mm^2 of film surface area, a number N_c of elevations whose respective heights h are correlated via the following equation

$$A_{h1}\text{-}B_{h1} \cdot \log_{10} h/\mu m \leq \log_{10} (N_C/mm^2) \qquad (1)$$

$$0.01\ \mu m \leq h \leq 1\ \mu m$$

$$A_{h1} = 0.05; \quad B_{h1} = 3.3.$$

2. The polyester film as claimed in claim 1, wherein the polyester of the base layer B contains units of ethylene glycol and terephthalic acid, and/or units of ethylene glycol and naphthalene 2,6-dicarboxylic acid.

3. The polyester film as claimed in claim 1, wherein the polyester used in the base layer B comprises polyethylene terephthalate.

4. The polyester film as claimed in claim 1, wherein the outer layer A comprises no external particles.

5. The polyester film as claimed in claim 1, wherein the external particles present in the outer layer C comprise antiblocking agents or pigments.

6. The polyester film as claimed in claim 1, wherein the antiblocking agents present in the outer layer C comprise SiO_2.

7. The polyester film as claimed in claim 1, wherein the external particles of the outer layer C have an average primary particle diameter smaller than 60 nm and/or an average primary particle diameter of from 1 to 4 µm.

8. The polyester film as claimed in claim 1, wherein the outer layer C comprises the external particles at a concentration of from 0.1 to 0.5% by weight, based on the weight of the layer C.

9. The polyester film as claimed in claim 1, wherein the planar orientation of the film is greater than 0.163.

10. The polyester film as claimed in claim 1, wherein the gloss (20°) of the uncoated surface layer A is greater than 190 and its roughness R_a is ≤ 28nm.

11. The polyester film as claimed in claim 1, which has an A-B-C layer structure.

12. The polyester film as claimed in claim 1, wherein the film coated on the outer layer A by the CVD or PECVD process has an oxygen transmission smaller than 3 $cm^3/(m^2 \cdot bar \cdot d)$.

13. The polyester film as claimed in claim 1, the outer layer A of which has been coated, using plasma-polymerized hexamethyldisiloxane or CH_4.

14. A process for producing a polyester film as claimed in claim 1, encompassing the steps of

    a) producing a multilayer film by extrusion or coextrusion and shaping the melts to give flat melt films

    b) stretching the film biaxially, and

    c) heat-setting the stretched film.

15. Packaging film formed from polyester film in accordance with claim 1.

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